

H A L B E R G :: A P P L E B Y :: N E L S O N :: S C H A F E R :: H A Z E L T O N



November 19, 2009

The Honorable Donovan W. Frank  
United States District Court  
724 Federal Building  
316 North Robert Street  
St. Paul, MN 55101

*VIA FACSIMILE & U.S. MAIL*

Re: *State of Minnesota v. CMI of Kentucky, et al.*  
USDC File No. 08-CV-603

Dear Judge Frank:

Late yesterday I reviewed an email from Mr. McNab on behalf of CMI. I was copied with a letter to your office for today's meeting.

As I review my letter to you earlier this week, I had tried to be issue neutral and simply notify the Court in general terms of the two issues and the amount of time needed. Apparently Mr. McNab felt his correspondence to you yesterday was needed to argue/clarify CMI's position in advance of our meeting.

I am requesting the status conference scheduled for today proceed. I welcome Mr. McNab having his expert available by phone. I will bring one or two of my experts to the meeting so we all understand the nuances of what we are discussing.

I will wait until our hearing to fully set forth our requests related to source code review.

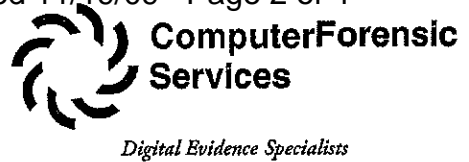
Sincerely,

HALBERG CRIMINAL DEFENSE

  
Marsh J. Halberg

MJH/ta

cc: William McNab, Esq.  
Emerald Gratz, Assistant Attorney General



November 19, 2009

Honorable Donovan W. Frank  
United States District Court, District of Minnesota  
724 Federal Building  
316 North Robert Street  
Saint Paul, MN 55101

**RE: Intoxilyzer 5000EN Source Code Review**

Dear Judge Frank:

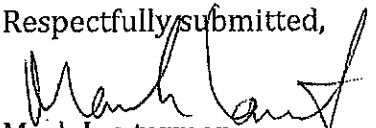
To facilitate the discussion of the process and procedure for handling portions of CMI's Intoxilyzer 5000EN Source Code, CFS has generated an example excerpt from a table of findings that would result from a Source Code review. CFS requires the ongoing use of Source Code portions as part of their interim work product and for use in subsequent documentation.

Throughout the source code review process, our analysis tools will both annotate source code and produce technical reports that contain Source Code portions. As such, CFS requests authorization to extract, both automatically and manually, portions of Source Code for use and transport on systems under the control of CFS experts.

The conveyance and placement of those portions into a final reporting format will also require production of Source Code portions, as demonstrated in the reporting format below called "Attachment A: Example Reporting Format Excerpt". This reporting format will produce the clearest, most expedient way to present the issues potentially revealed through the Source Code review.

Additionally, CFS requires the analysis of all of the parts of the Intoxilyzer 5000EN "Minnesota Model" to comprehensively understand its Source Code. Please see "Attachment B: The Ecosystem of Embedded Devices" as an illustration that the software is just one small part of a system and has no context without viewing the device as a whole. Our hardware analysis expert, Dr. Harley Myler, needs to disassemble and analyze either a model supplied by CMI, or to have the MSCJ's device certified by CMI and loaded with the correct code.

Respectfully submitted,

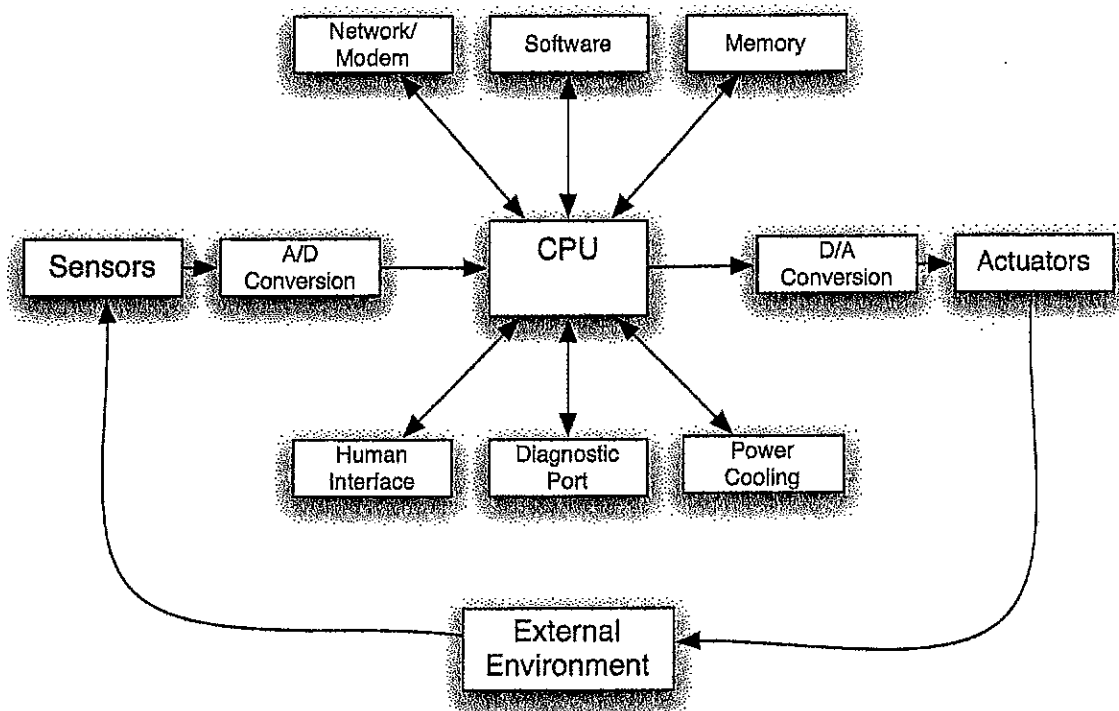
  
Mark Lanterman  
Chief Technology Officer

**Attachment A: Example Reporting Format Excerpt**

Issue Summary:	The Intoxilyzer 5000EN does not correctly compute "slope" samples.
Relevance to BAC Readings:	The Intoxilyzer collects several readings to perform a "slope" analysis to decide if its internal sensor readings are valid. The final reading is accidentally cleared and ignored. This leads the device to improperly refuse samples. CFS has physically verified this issue with the Intoxilyzer 5000EN.
Supporting Source Code:	<pre> Start at line 15 of "slope_functions.c": 15: #define MAX_SLOPE_COUNT 3 16: function is_slope_valid(double s1, double s2, double s3) 17: { 18:     double slope = 0; 19: 20:     slope = s1 + s2 + s3; 21:     slope = slope / 3; 22: 23:     if(slope == 0) printf('INVALID SLOPE'); 24: 25:     return(slope); 26: } </pre>
Supporting Source Code Commentary:	The code "if(slope == 0)" incorrectly sets "slope" to 0, instead of checking for 0.
Manual Verification:	CFS has observed that if a forceful breath sample is supplied to the device then the supply abruptly stops, the device improperly registers a Refusal reading. Please see the attached affidavit ("Affidavit #14501: Demonstration of Slope Detection Issues in the Intoxilyzer 5000EN Minnesota Model") from John Doe regarding the replication of this issue.
Manual Verification Commentary:	As "slope" is improperly set to 0, the device believes the abruptly cut-off sample reading of 0 to be an unchanging slope and displays a Refusal as the result.

Notice: This reporting excerpt is completely fictional and is only provided as an example of the report format to be presented by the source code review experts.

## Attachment B: The Ecosystem of Embedded Devices



It is important to note that "Software" is just one part of a tightly integrated device. The Source Code review will need to factor in the entire ecosystem to understand the inputs, output, and operation of the Source Code within the device.